بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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بالرسالة صفحات

لم ترد بالأصـــل

Role of Multi-slice CT Angiography versus Doppler Ultrasonography in Assessment of Aorto-iliac Arterial Disease

Thesis

Submitted in Partial Fulfillment for

Master Degree In

Radiodiagnosis

By

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2005

جامعة القاهرة / كلية الطب
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محضـــــــر

اجتماع لجنة الحكم على الرسالة المقدمة من الطبيب / حازم حامد عبد الحفيظ
توطئة للحصول على درجة الماجستير فى الأشعة التشخيصية

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عنوان الرسالة باللغة العربية : مقارنة دور الأشعة المقطعية متعددة المقاطع والدوبلر في تقييم امراض الشريان الاورطى والشرايين الحرقفية

عنوان الرسالة باللغة الأجنبية:-

Role of Multi-slice CT Angiography versus Doppler Ultrasonography in Assessment of Aorto-iliac Arterial Disease

بناء على موافقة الجامعة بتاريخ ٧ / ٧ / ٢٠٠٥ تم تشكيل لجنه الفحص والمناقشة للرسالة المذكورة أعلاه على النحو التالى :-

أ.د. إيهاب إسماعيل على	استاذ الاشعة التشخيصية كلية الطب جامعة القاهرة	(عن المشرفين)
أ.د. حسن احمد سليمان	أستاذ جراحة الأوعية الدموية- طب القاهرة	(ممتحن داخلى)
أ.د. محمد إيهاب سامى رضا	أستاذ الأشعة التشخيصية- طب الإسكندرية	(ممتحن خارجي)

بعد فحص الرسالة بواسطة كل عضو منفردا وكتابه تقارير منفردة لكل منهم انعقدت اللجنة مجتمعة فى يوم السبت بتاريخ ٣٠ /٢٠٠٥/٧ بقاعة المحاضرات بقسم الأشعة التشخيصية - بكلية الطب – جامعة القاهرة وذلك لمناقشة الطالب فى جلسة علنية فى موضوع الرسالة والنتائج التى توصلت إليها وكذلك الأسس العلمية التى قام عليها البحث.

❖ قرار اللجنة :

توقيعات اعضاء اللجنة :-

المشرف الممتحن | الممتحن الداخلى | الممتحن الخارجي

Abstract

The new clinical entity, known as aorto-iliac atherosclerosis obliterans or aorto-iliac occlusive disease (AIOD), is one of the most frequent clinical problems confronted by vascular surgeons today. The abdominal aorta and iliac arteries being amongst the arterial segments most commonly affected by atherosclerosis.

Digital subtraction angiography is considered the gold standard technique in assessment of these arteries. The major advantage of DSA are high spatial resolution images and temporal information regarding delayed filling of the vasculature of interest. However, the invasiveness of the procedure, and radiation exposure led to the need for less and non-invasive imaging techniques.

The aim of this study is to evaluate the MDCT angiography as a recent non invasive technique for investigating aorto-iliac arterial disease as compared to CCD and DSA. This study included 16 patients (12 males & 4 females) with an age range of 33 – 75 years. All of these patients underwent MDCT angiography and CCD. Only 13 patients underwent DSA.

The arterial tree of the lower limbs was divided into 31 arterial segments. Each segment was evaluated and given a grade from 0 to 4 according to its appearance in the three modalities. There was a 98.7% agreement between the findings of DSA and MDCT angiography. While agreement between DSA and CCD was 96.1%. The sensitivity of MDCT angiography in this study was 98.7% when considering the conventional angiography as the gold standard, while the sensitivity of the color coded Doppler was 96.2%.

MDCT angiography has proved to be a less invasive and a reliable method of investigating the lower limb arterial disease with results comparable to DSA. MDCT angiography as a less invasive imaging modality may be used for preoperative assessment of lower limb arterial disease. Conventional angiography may be spared for patients who are candidate for interventional procedures (e.g. angioplasty or stent application).

Color coded Doppler is also a reliable non-invasive method of investigating the lower limb arterial system. It has an advantage over conventional angiography and MDCT angiography that it provides us with data about the velocity of blood distal to the obstruction and shape of the waveform that adds more to determining the hemodynamic significance of this lesion.

Key Words:

Multi-detector row CT, CT angiography, Aorto-iliac arterial disease, Color coded Doppler, Non-invasive vascular imaging.

ACKNOWLEDGEMENT

First, I would like to thank Allah the merciful and compassionate for making all this work possible and for granting me with the best teachers, family, friends and colleagues that many people would wish and dream of having.

I am honored to have Prof. Dr. ***Ihab Ismail Ali****, Prof. of Radiodiagnosis, Faculty of Medicine, Cairo University, as a supervisor of this work. I am greatly indebted to him for his valuable supervision and kind guidance.*

I am deeply thankful to Dr. ***Hatem El-Azizy****, Lecturer of Radiodiagnosis, Faculty of Medicine, Cairo University, for his great help and effort to make this work possible. I was much honored to work with him.*

I also deeply thank Prof. Dr. ***Mohamed El-Toukhy****, Head of the CT unit, and all the staff members for their guidance and cooperation during this study.*

Furthermore, I would like to convey my special thanks to all my staff members, my colleagues and nursing stuff.

At last, but definitely not least, I would like to thank my entire family for their support and encouragement. No dedication can match theirs.

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